CLEAN AIR ACT SECTION 112(r) INSPECTION REPORT

Laser Products Inc.

Juncos, Puerto Rico

GENERAL INFORMATION

Stationary Source	Laser Products Inc.
Date of Inspection	September 9, 2008
USEPA Inspector	Carlos Rivera, USEPA – Region II, Caribbean Office, Enforcement
Contract Auditor	Neil Mulvey, Sullivan Group (Subcontractor)
Description of Activities	• Opening meeting with facility representative. • Program audit. • Closing meeting with facility representatives. Program audit consisted of the following activities: 1. Document review. 2. Field verification. 3. Personnel interviews

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000 0003 8915
Date of Latest Submission (used for RMP inspection)	Receipt Date: August 28, 2007 (Correction) Anniversary Date: April 13, 2009
Facility Location	185 Km. 19 Antigua Central Juncos Juncos, PR 00777-1723 Tel. (787) 653-3700
Number of Employees	*RMP*Submit* states 19 employees. Facility management reported 25 employees.

Description of Surrounding Area	The facility conducts business on a six acre site located in a commercial / industrial section of Juncos. The facility is bordered by an industrial company immediately to the northeast. Open space lies to the north, south, and west. Commercial roads border the facility to the south and west. The nearest resident is approximately 0.5 miles to the north.
Participants	Participants included representatives from: Carlos Rivera, USEPA – Region II, Caribbean Office Neil P. Mulvey, USEPA Contractor – Sullivan Group Angel L. Cruz, Plant Manager, Laser Products Inc. Raymond B. Huddleston, Regulatory Advisor, Consultant* * Lead representative for Laser Products.

REGISTRATION INFORMATION

Process ID #	71964
Program Level (as reported in RMP)	Program 3
Process Chemicals	Chlorine @ 2,000-lbs. (Registered quantity)
NAICS Code	325181 (Alkalies and Chlorine Manufacturing)

GENERAL COMMENTS

Business conducted at the Laser Products Inc., Juncos, PR facility includes two major activities: production of hypochlorite solution (12% and 15%) and distribution of 1-ton and 150-lbs. chlorine cylinders. The hypochlorite solution (i.e., bleach) is sold as a consumer product. The facility operates one shift, M – F.

Chlorine is used in the production of hypochlorite solution by reacting caustic soda solution with chlorine in the presence of a small amount of soda ash for buffering. Chlorine is fed to the process from 1-ton cylinders from either of two feed connection points. The two connection points tie into a common feed line. The chlorine feed line goes to a 'chlorine tower' (i.e., barometric leg), then to a manifold station where it can then feed any one of three mix tanks. The design intent of the chlorine tower is to prevent reverse flow of liquid from the mix tanks back to the 1-ton cylinders. The facility uses approximately 6,000-lbs. of chlorine per day in this batch operation.

The process includes one chlorine detector located in a containment area near the mix tanks. The facility reported that the chlorine detector sounds an audible alarm at 3 PPM, but was out of service at the time of this inspection.

The entire production process is conducted in an open sided area raised on a concrete platform covered with an aluminum shed roof. Storage of 1-ton chlorine cylinders intended for use as a raw material in producing hypochlorite solution is an open area located at ground level just east of the production area.

Chlorine distribution involves the receipt, storage, and distribution of 1-ton and 150-lbs. chlorine cylinders. Cylinders are distributed to PRASA facilities. One-ton chlorine cylinders are stored in an open area that is contiguous with the parking lot.

RMP DOCUMENTATION

The only RMP documents available for review were related to the *RMP*Submit* registration. Several conflicting registrations were on file, including their most recent submission. There were no other RMP documents available for review.

Comments regarding select RMP elements follow:

Management System [*40 CFR 68.15*] & Registration

While the Plant Manager has overall responsibility for implementation of the RMP program, he did not demonstrate an understanding of the RMP program requirements. There were minimal records available to support implementation. The facility's consultant demonstrated some understanding of the RMP requirements.

There was no written description of a management system.

The *RMP*Submit* registration lists the chlorine inventory as 2,000-lbs. During the time of the September 9, 2008 inspection, approximately 111 one-ton cylinders were on-site, totaling 222,000-lbs.

Hazard Assessment

See the RMP Checklist for information regarding hazard assessment.

Process Safety Information (PSI) [*40 CFR 68.65*]

The only PSI documentation available for review was an MSDS for chlorine. No other documentation was available for review. See RMP Checklist for list of PSI required items not available for review.

Process Hazard Analysis (PHA) [*40 CFR 68.67*]

There was no record or copy of a completed PHA of the process available for review.

Standard Operating Procedures (SOPs) [*40 CFR 68.69*]

There were no written operating procedures available for review related to the receipt, storage, and handling of chlorine cylinders or the production of hypochlorite using chlorine as a raw material.

Training [*40 CFR 68.71*]

Operator training records included:

- Employee OSHA 40-hours of HAZWOPER training.
- 40-hour HAZWOPER training for the hypochlorite crew leader (completed in January 2008).
- Employee safety training provided by their chlorine supplier, Jones Chemical.

Training records were filed by employee name and included written tests to verify operator understanding of training received.

There were no training records however regarding specific tasks related to the handling of chlorine cylinders or use of chlorine in the hypochlorite process.

Mechanical Integrity [*40 CFR 68.73*]

There was no written mechanical integrity program available for review. The facility did have records of inspection and calibration of the chlorine sensor, performed on a 6-month schedule (reviewed record of calibration in 1/08 and 7/08; next scheduled for 1/09). However it should be noted that the chlorine sensor was not functioning at the time of this inspection.

Management of Change (MOC) [*40 CFR 68.75*] & Pre-Startup Review (PSR) [*40 CFR 68.77*]

There were no written MOC or PSR procedures available for review. There were no completed MOC or PSR reviews available for inspection.

Compliance Audits [*40 CFR 68.79*]

There was no record of completed RMP compliance audits.

Incident Investigation [*40 CFR 68.81*]

There was no record of a written incident investigation procedure. The Plant Manager stated that there have been no reportable chlorine releases.

Employee Participation [*40 CFR 68.83*]

There was no written employee participation plan available for review.

Hot Work Permit [*40 CFR 68.85*]

There was no record of a hot work permit program.

Contractor Safety [*40 CFR 68.87*]

There was no record of written contractor safety procedures.

Emergency Response [*40 CFR 68.90 – 68.95*]

Evaluated by USEPA inspector.

FACILITY TOUR

Several items noted during the facility tour include:

- The process includes one chlorine detector located in a containment area near the mix tanks. The facility reported that the chlorine detector sounds an audible alarm at 3 PPM, but was out of service at the time of this inspection. There was no chlorine sensor located at the 1-ton chlorine cylinder feed station. **The facility should immediately repair and place the chlorine sensor back into service and ensure that it is included in the mechanical integrity program to ensure continued operating integrity. The facility should consider adding additional chlorine sensors in areas of potential chlorine leaks, such as at the 1-ton chlorine cylinder feed station.**

- One-ton chlorine cylinders are stored directly on the ground in an open area that is contiguous with the parking lot as well as areas immediately adjacent to truck loading / unloading dock and is therefore vulnerable to external events such as impact with cars and trucks moving throughout the area. The cylinders are stored using unsecured wood dividers. The entire cylinder storage area is exposed to direct sunlight and rain since no shed or covered area is provided. **The facility should evaluate the 1-ton chlorine cylinder storage area regarding the potential for vehicle impact and provide necessary safeguards to prevent vehicle impact. The facility should review their current storage and handling practices in comparison to industry standards, such as The Chlorine Institute.**

- When unloading 1-ton chlorine cylinders from truck trailers onto the dock, the trailer is not secured to the dock. **The facility should consider installing a dock-lock or other means to firmly secure the trailer to the dock when unloading 1-ton chlorine cylinders.**

- There were signs of external corrosion at flanges and valves on the chlorine line at the 1-ton feed station. **The facility should conduct an integrity inspection of the chlorine feed line and flanges in accordance with good engineering practices.**

- One of the chlorine lines from the manifold station to the mix tanks is bowed and mis-shapen. Additionally, some of the chlorine lines appear to be supported using wire. **The facility should conduct an integrity inspection of the chlorine feed line**

and ensure proper support for the lines, in accordance with good engineering practices.

- The facility uses an unconventional means to ensure valves are in a locked position**. The facility should establish a safe work practice for ensuring valves are maintained in desired locked position and utilize industry standard valve locking devices.**

- The chlorine A and B kits at the facility were not sealed, leading to the possibility that the kits are missing parts or tools that may be needed in the event of an emergency. **The facility must either maintain the chlorine A and B kits in a sealed state or otherwise ensure that all necessary parts and tools are present.**

FINDINGS/RECOMMENDATIONS

Registration Information

- The *RMP*Submit* registration lists the chlorine inventory as 2,000-lbs. During the time of the September 9, 2008 inspection, approximately 111 one-ton cylinders were on-site, totaling 222,000-lbs. **The facility should submit a corrected *RMP*Submit* registration reflecting the maximum intended chlorine inventory.**

Management System [*40 CFR 68.15*]

- **The facility must prepare a written description of its RMP management system, assign qualified personnel to implement the program and ensure such personnel are knowledgeable of RMP requirements and facility programs and procedures.**

Process Safety Information (PSI) [*40 CFR 68.65*]

- Other than an MSDS of chlorine, there was no PSI on file for review. **The facility must compile / develop process safety information describing the technology in the process and equipment in the process as required by 40 CFR 68.65(c) and (d).**

- **The facility must document that equipment complies with recognized and generally accepted good engineering practices as required by 40 CFR 68.65(d)(2).**

Process Hazard Analysis (PHA) [*40 CFR 68.67*]

- There was no completed PHA on file for review. **The facility must complete a PHA as required by 40 CFR 68.67.**

Standard Operating Procedures (SOPs) [*40 CFR 68.69*]

- There were no written operating procedures available for review. **The facility must develop written operating procedures for the receipt, storage, and handling of chlorine cylinders and the production of hypochlorite using chlorine as a raw material, as required by 40 CFR 68.69.**

- **The facility must develop necessary safe work procedures (including hot work permit procedures) to ensure safe work practices are employed at the covered process, as required by 40 CFR 68.69(d).**

Training [40 CFR 68.71

- There were no training records however regarding specific tasks related to the handling of chlorine cylinders or use of chlorine in the hypochlorite process. **The facility must prepare and implement an operator training program related to the covered process, including the handling of chlorine cylinders and use of chlorine in the hypochlorite process, as required by 40 CFR 68.71.**

Mechanical Integrity [*40 CFR 68.73*]

- There was no written mechanical integrity program available for review. The facility did have records of inspection and calibration of the chlorine sensor, performed on a 6-month schedule (reviewed record of calibration in 1/08 and 7/08; next scheduled for 1/09). However it should be noted that the chlorine sensor was not functioning at the time of this inspection. **The facility must develop a complete mechanical integrity program as required by 40 CFR 68.73 for all equipment, lines, instruments, and safety systems used in the covered process.**

Management of Change (MOC) [*40 CFR 68.75*] & Pre-Startup Review (PSR) [*40 CFR 68.77*]

- There was no written MOC or PSR procedure available for review. **The facility must develop and implement the required MOC (40 CFR 68.75) and PSR (40 CFR 68.77) procedures.**

Compliance Audits [*40 CFR 68.79*]

- There were no records of completed RMP compliance audits. **The facility must complete RMP compliance audits at least once every three years, as required by 40 CFR 68.79.**

Incident Investigation [*40 CFR 68.81*]

- There was no record of a written incident investigation procedure. The Plant Manager reported that there have been no reportable chlorine releases. **The facility must develop an incident investigation procedure as required by 40 CFR 68.81.**

Employee Participation [*40 CFR 68.83*]

- There was no record of a written employee participation plan available for review. **The facility must develop a written employee participation plan as required by 40 CFR 68.83.**

Hot Work Permit [*40 CFR 68.85*]

- There was no record of a hot work permit program. **The facility must develop a written hot work permit program as required by 40 CFR 68.85.**

Contractor Safety [*40 CFR 68.87*]

- There was no record of written contractor safety procedures. **The facility must develop and implement contractor safety procedures as required by 40 CFR 68.67.**